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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,947	07/31/2001	Guido Kersten	KERS3001/JJC/LCD	1529

23364   7590   01/11/2008

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ART UNIT	PAPER NUMBER
2193	

MAIL DATE	DELIVERY MODE
01/11/2008	PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/917,947
Filing Date: July 31, 2001
Appellant(s): KERSTEN ET AL.

MAILED

JAN 1 1 2008

Technology Center 2100

Justin Cassell
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 10/16/2007 appealing from the Office action

mailed on 6/5/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings

which will directly affect or be directly affected by or have a bearing on the Board's decision in

the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in

the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,909,502   Mazur   6-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mazur (US Patent 5,909,502).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1, 2, and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mazur (US Patent 5,909,502).

Per claim 1:

Mazur discloses:

-    A bank note processing machine comprising (i.e. "currency handling machines," col.

     1 lines 5-10)

-    sensors ("magnetic sensing or optical sensing," col. 1 lines 18-39),

-    a transport system ("Bill transport mechanism," see Fig 1) including a singling unit

     ("Bill separating station," Fig . 1)

-    and at least one stacking unit ("Bill stacking station," Fig. 1),

-    an input/output device (see the Bill accepting station/output unit, Fig. 1),

-    and a control device with an associated memory which controls the elements of

     the bank note processing machine by means of software and/or data stored in

the memory (i.e. "loading software into a currency discrimination machine. A resident memory within the machine contains an initial software code to be executed by the central processing unit...The initial software code includes operational control software and a first set of master characteristic patterns corresponding to the different denominations of bills to be evaluated by the currency discrimination machine," col. 2 lines 18-30; see fig 1)

- an interface which makes it possible to couple memory systems of different kinds to the bank note processing machine in order to alter, supplement or replace the software and/or data stored in the memory (i.e. "connector interface compatible with the Personal Computer Memory Card International Association (PCMCIA) industry standards," col. 8 lines 10-22; "PCMCIA-compatible ...receptacle for receiving a flash card," col. 8 lines 25-40, which explains that the PCMCIA interface enables to couple any memory system compatible according to PCMCIA).

Mazur does not explicitly teach that the memory system has a drive and a storage medium, which are suitable for optical and/or magnetic recording. However, Mazur teaches that "similar to the resident memory, the flash card memory need not be a flash memory but may be comprised of any of several other types of memorys known in the art (col. 7 lines 62-67; col. 9 lines 5-10)." It would have been obvious for one having ordinary skill in the art to modify Masur's disclosed system to add a certain memory system consisting of a drive and a storage medium such as a hard disk drive, Iomega's Click Drive etc known prior to 1999 to couple to the PCMCIA compatible interface in Mazur to enable such a memory system to be used as an

alternative if desired. The modification would be obvious because one having ordinary skill in

the art would be motivated to use a memory system having a drive and a storage medium such as

a hard disk drive, Click Drive etc for lower cost or simply for user preference.

Mazur further discloses:

- wherein the transport system transports single bank notes singled by the

   singling unit along the sensors to the at least one stacking unit according to an

   evaluation of data obtained by the sensors by the control device (i.e. "Accepted bills

   are acted upon by a bill separating station 14 which functions to pick out or separate

   one bill at a time for being sequentially relayed by a bill transport mechanism

   16…across an optical scanhead 18 where the currency denomination of the bill is

   scanned, identified and counted. The scanned bill is then transported to a bill

   stacking station 20," col. 3 lines 41-60; The initial software code includes operational

   control software and a first set of master characteristic patterns corresponding to the

   different denominations of bills to be evaluated by the currency discrimination

   machine," col. 2 lines 18-30; col. 4 lines 52-67; see fig 2) as claimed.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Mazur teaches:

- wherein that the interface is a standardized interface, in particular according

   to PCMCIA (i.e. col. 8 lines 13-40) as claimed.

Per claim 4:

The rejection of claim 1 is incorporated, and further, Mazur teaches:

- wherein the memory has a nonvolatile area, and after coupling of the memory system to the interface the software and/or data stored in the memory system are stored in the nonvolatile area (i.e. col. 7 lines 53-67; which discloses a nonvolatile resident memory) as claimed.

Per claim 5:

The rejection of claim 1 is incorporated, and further, Mazur teaches:

- wherein that the memory has a volatile area, and after coupling of the memory system to the interface the software and/or data stored in the memory system are stored in the volatile area (i.e. col. 6 lines 10-20) as claimed.

Per claim 6:

The rejection of claim 1 is incorporated, and further, Mazur teaches:

- wherein data obtained in the bank note processing machine during operation are stored in the memory system (i.e. col. 7 lines 53-67; col. 8 lines 13-40) as claimed.

Per claim 7:

The rejection of claim 1 is incorporated, and further, Mazur teaches:

- wherein the software and/or data stored in the memory system are stored in encoded form, and the controller is set up to decode the encoded software and/or data (i.e. col. 8 lines 40-58; fig.6) as claimed.

(10) Response to Argument

Per claim 1 (brief, pages 10-15):

The appellant contends that:

1) While the Mazur patent recognizes that memories such as ...EEPROMs...may be used in place of the flash memory disclosed, there is no disclosure that the different memory types disclosed may be utilized with an interface which allows different memory systems to be coupled to the currency discrimination machine....the interface clearly show an interface that is configured to accept a particular size and type of memory, instead of an interface that allows different memory systems to be coupled to the currency discrimination machine as required by pending claim 1 (brief, 11).

In response, both Mazur and the present invention relate to a bank note (currency) processing machine. The instant specification states that the interface coupled to the memory system is a "standardized interface, in particular a PCMCIA standard interface (i.e. specification, page 2, lines 23-27)." The specification acknowledges that the PCMCIA interface show the "advantage that a plurality of memory systems are already available on the market which can immediately be used without any further adaptation for updating, replacing or altering the software of the bank note processing machine (specification, page 2, lines 23-27)." Therefore, it is evident that the present invention simply uses such a standardized interface, which is clearly not a novel interface, to allow the "plurality of different memory systems to be coupled (specification, page 2, lines 17-19)." The specification provides a disk drive as one example of the "plurality of different memory systems (page 5, lines 1-6)." Mazur discloses the interface compatible with the PCMCIA industry standards to couple the flash card (i.e. col. 8 lines 13-22,

26-31) and further states that the memory systems such as the resident memory and flash card memory can be comprised of any of several other types of memories known in the art other than flash memory (i.e. col. 7 lines 62-67; col. 6 lines 9-20). The PCMCIA interface in Mazur allows the use of different types of memories.

Using such different types of memories is also possible in Mazur because the industry standard PCMCIA interface allows many available memory systems for such an interface to be used without further adaptation, as the instant specification states (i.e. specification, "using an interface according to the PCMCIA standard allows since a plurality of memory systems are available for such interfaces and can be used without further adaptation, page 4, lines 11-14).

2) If an improperly sized socket, or a mismatched socket and flash memory are utilized, the interface will simply not function. Thus, the Mazur patent discloses uniquely sized and shaped sockets for receiving a correspondingly sized and shaped flash memory. There is no disclosure or suggestion in the Mazur patent to provide an alternate interface that would allow different types of memory systems to be coupled to the currency discrimination machine (brief, 11). The Mazur patent does not disclose or suggest a bank note processing machine wherein the memory system has a drive and a storage medium which are suitable for optical and/or magnetic recording (brief, 11-12).

In response, according to the instant specification, the "alternate interface" is the standardized PCMCIA interface ad addressed above. Mazur discloses the PCMCIA interface that would allow different types of memory systems to be coupled to the currency processing machine such as flash card, EEPROMs, a disk drive, as in the instant invention. As Mazur states that the memory systems such as the resident memory and flash card memory can be comprised

of any of several other types of memories known in the art other than flash memory (i.e. col. 7

lines 62-67; col. 6 lines 9-20), the PCMCIA interface in Mazur allows the use of different types

of memories.

3) although the Mazur patent describes a PCMCIA interface used for receiving a flash

memory card, the Mazur patent does not describe either implicitly or explicitly that the PCMCIA

interface enables to couple to any memory system compatible according PCMCIA…Hence,

there is no premise …that it would be obvious for one skilled in the art at the time the invention

was made to combine a memory system having a drive and a storage medium which are suitable

for optical and/or magnetic recording with the bank note machine (brief, 10-13).

As has been addressed above, the PCMCIA interface is "industry standards (Mazur, col.

8 lines 13-22)" and therefore, enables to couple to different kinds of memory systems that "are

already available on the market which can immediately be used without any further adaptation

(specification, page 2, lines 23-27)," as acknowledged in the instant specification. As Mazur

states that the memory systems such as the resident memory and flash card memory can be

comprised of any of several other types of memories known in the art other than flash memory

(i.e. col. 7 lines 62-67; col. 6 lines 9-20), the PCMCIA interface in Mazur allows the use of

different types of memories. Therefore, the motivation would be obvious to add a certain

memory system such as a disk drive to couple to the PCMCIA standardized interface in Mazur to

enable such a memory system to be used as an alternative if desired, as in the instant invention.

4) the use of a memory system having a drive and a storage medium which are suitable

for optical and/or magnetic recording as a memory system of different kinds, as recited in claim

1, is a careful and engineered feature with many advantages over other storage media (brief, 14).

For example...the memory system recited in pending claim 1 permits an operator to select from

a plurality of memory systems and may include criteria for selecting memory by memory

volume, size...price...it is disclosed that a magnetic or optical recording medium having high

writing density (specification, page 2, lines 29-30) is advantageous, and that the use of such a

medium makes it possible to fall back on inexpensive recording media suitable for recording

masses of data. Therefore, Appellant has demonstrated the criticality and unexpected result of

the claimed feature of a storage medium which is suitable for optical/or magnetic recording over

known prior art such as the Mazur patent (brief, 14). The examiner...fails to recognize the

criticality and unexpected result of using a memory system having a drive and a storage medium

which are suitable for optical and/or magnetic recording of claim 1 (brief, 15).

In response, the present invention merely uses an industry standardized interface to allow

a disk drive to be coupled to the interface according to the instant disclosure. The examiner fails

to see how such a use of the memory system is a "careful and engineered feature" that is distinct

from Mazur's system when Mazur also uses the PCMCIA interface. As this interface allows

other memory medium such as a disk drive to be coupled to the interface and the use of "such a

medium makes it possible to fall back on inexpensive recording media suitable for recording

masses of data," the examiner has also demonstrated the criticality and unexpected result of

using a storage medium which is suitable for optical/or magnetic recording.

Per claim 2:

The appellant contends that: although the Mazur patent describes the coupling of a flash

memory card to a currency scanner via a PCMCIA interface, the Mazur patent fails to teach...a

memory system having a drive and a storage medium which are suitable for optical and/or

magnetic recording interfaced with a bank note processing machine via a PCMCIA interface
(brief, 16).

In response, this has been addressed above.

Per claim 4:

The appellant contends that: one skilled in the art would not have been motivated ....to
provide a feature wherein the memory has a nonvolatile area, and after coupling of the memory
system to the interface the software and/or data stored in the memory system are stored in the
nonvolatile area (brief, pages 16-17).

In response, Mazur states that the resident memory may be comprised of any of several
types of memories known in the art, including EEPROMs and flash memory which are
nonvolatile (i.e. col. 6 lines 9-20).

Per claim 5:

The appellant contends that: one skilled in the art would not have been motivated ....to
provide a feature wherein the memory has a volatile area, and after coupling of the memory
system to the interface the software and/or data stored in the memory system are stored in the
volatile area (brief, page 17).

In response, Mazur states that the resident memory may be comprised of any of several
types of memories known in the art, including a volatile memory such as RAMs (i.e. col. 6 lines
9-20).

Per claim 6:

The appellant contends that: one skilled in the art would not have been motivated ....to provide a feature wherein data obtained in the bank note processing machine during operation are stored in the memory system (brief, page 17).

In response, Mazur states that the resident memory retains the initial or updated data content of the software (col. 2 lines 29-40; col. 8 lines 45-53).

Per claim 7:

The appellant contends that: one skilled in the art would not have been motivated ....to provide a feature wherein the software and/or data stored in the memory system are stored in encoded form, and the controller is set up to decode the encoded software and/or data.

In response, software code is encoded and decoded for execution. Mazur specifically discloses the optical encoder in Fig. 6. The reverse transformation from the optical encoder 32 to CPU 30 is the decoding operation.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.
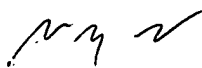
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